



SPLICE MATERIAL REQUIREMENTS					
HP 10"		HP 12"		HP 14"	
1 BAR MA 1" x 1/4" x 7 1/2"		1 BAR MA 1" x 1/4" x 9 3/8"		1 BAR MA 1" x 1/4" x 1'-0"	
2 BARS MB 1" x 1/4" x 10"		2 BARS MB 1" x 1/4" x 1'-0"		2 BARS MB 1" x 1/4" x 1'-2 1/2"	
2 BARS MC 3" x 3/8" x 11"		2 BARS MC 3" x 3/8" x 1'-1"		2 BARS MC 3" x 3/8" x 1'-3"	

NOTE A: MAKE END OF WELD SMOOTH AND FLUSH WITH WEB CUT, 1/4" MIN. EFFECTIVE THROAT.  
 NOTE B: TACK WELD BAR MC TO FLANGE AT SPLICE TO BACK UP END OF FLANGE WELD, REMOVE MC AFTER WELD IS COMPLETED. END OF WELD MUST BE SMOOTH AND FLUSH WITH EDGE OF FLANGE. GRIND WELD SMOOTH WITH EDGE OF FLANGE IF PILE IS UNSUPPORTED IN WELD AREA SUCH AS: IN AIR, WATER, OR SOFT MUD, 1/4" MIN. EFFECTIVE THROAT.  
 NOTE C: LET WELDS COOL TO AIR TEMPERATURE BEFORE RESUMING THE PILE DRIVING.  
 NOTE D: NO PILE SPLICING IS ALLOWED ON ANY PORTION OF PILE THAT IS TO REMAIN EXPOSED OR TO BE ABOVE FINISHED GROUNDLINE IN COMPLETED STRUCTURE.  
 NOTE E: ALL SPLICE MATERIALS MUST BE ASTM A709, GRADE 50.  
 NOTE F: THE 0.25-INCH THICKNESS FOR MA AND MB BARS SPECIFIED IN THE 'SPLICE MATERIAL REQUIREMENTS' TABLE MAY BE REDUCED TO MINIMUM OF 0.203-INCH THICK.

## STEEL H-PILE SPLICE DETAILS

PILE INSTALLATION DATA					
SUBSTRUCTURE UNIT	DESIGN DATA		ACTUAL FIELD DATA		
	MINIMUM TIP ELEVATION	ESTIMATED PILE TIP ELEVATION	ACTUAL MINIMUM TIP ELEVATION	ACTUAL AVERAGE TIP ELEVATION	ACTUAL MAXIMUM TIP ELEVATION

TYPICAL H-PILE SIZES	
SECTION	WEIGHT (LB/FT)
HP 8"	36
HP 10"	42
	57
	53
	63
	74
	84
	89
	102
	117
	73
	89
	102
	117
	88
	101
	121
	141
	162
	183
	135
	157
	181
	204

## PROJECT SPECIFIC PILE NOTES

- PILE TYPE:  
THIS PROJECT WILL UTILIZE HP \_X\_ PILES CONFORMING TO ASTM A709, GRADE 50.
- ESTIMATED PRODUCTION PILE LENGTH IS \_'\_.  
3. REQUIRED TEST PILE LENGTH IS \_'\_, LONGER THAN THE ESTIMATED PRODUCTION PILE LENGTH.
- DRIVE PILES TO A BEARING RESISTANCE OF \_KIPS USING A RESISTANCE FACTOR OF \_.
- MINIMUM TIP ELEVATION WILL NOT BE REQUIRED FOR THIS PROJECT OR REFER TO THE PILE INSTALLATION DATA TABLE FOR MINIMUM TIP ELEVATION.

## GENERAL PILE NOTES

- FOR MORE INFORMATION REGARDING PILE DRIVING, INSTALLATION, MATERIALS, AND FABRICATION, REFER TO SECTION 605 - DRIVEN PILES OF THE STANDARD SPECIFICATIONS.
- (A) DRIVE TEST PILES AT EACH LOCATION SHOWN ON THE PLANS. PRODUCTION PILES WILL BE ORDERED BASED ON THE RESULTS OF THE TEST PILE DRIVING.  
OR  
(B) ORDER SAME LENGTH FOR ALL PILES (I.E. WITHOUT A LONGER TEST PILE). TEST PILES, AS NOTED, WILL BE DRIVEN FIRST TO ESTABLISH DRIVING CRITERIA FOR THE OTHER PILES IN EACH SUBSTRUCTURE ELEMENT. AN ADDITIONAL \_'\_' HAS BEEN ADDED TO THE DESIGN LENGTH OF EACH PILE AS A CONTINGENCY.

## STEEL H-PILE NOTES

- STEEL H-PILE SPLICE DETAILS APPLIES ONLY TO HP 10", HP 12", AND HP 14" PILES.
- THE CONTRACTOR MAY CONSIDER USING ALTERNATIVE STEEL H-PILE SPLICE DETAILS. SUBMIT ALTERNATIVE DETAILS FOR STEEL H-PILE SPLICING TO THE DEPARTMENT FOR APPROVAL.
- USE A HEAVY-DUTY TIP REINFORCEMENT FOR ALL PILES. THE TYPE OF TIP REINFORCEMENT MUST BE APPROVED BY THE DEPARTMENT. PAYMENT INCIDENTAL TO THE RESPECTIVE PILE ITEM.

## DESIGNER NOTES

- 'PROJECT SPECIFIC PILE NOTES', 'GENERAL PILE NOTES', AND 'STEEL H-PILE NOTES' ARE REQUIRED TO BE SHOWN ON THE PLAN SETS.
- UNDER 'PROJECT SPECIFIC PILE NOTES', NOTE 2, THE ESTIMATED PRODUCTION PILE LENGTH SHOULD BE EQUAL TO THE ESTIMATED DESIGN PILE LENGTH IF 'GENERAL PILE NOTES', NOTE 2(A) IS USED, IF 'GENERAL PILE NOTES', NOTE 2(B) IS USED, THEN THE ESTIMATED PRODUCTION PILE LENGTH SHOULD BE EQUAL TO THE ESTIMATED DESIGN PILE LENGTH + 5'-0".
- UNDER 'PROJECT SPECIFIC PILE NOTES', NOTE 3, THE REQUIRED TEST PILE LENGTH SHOULD BE 10'-0" LONGER THAN THE ESTIMATED PRODUCTION PILE LENGTH IF 'GENERAL PILE NOTES', NOTE 2(A) IS USED, IF 'GENERAL PILE NOTES', NOTE 2(B) IS USED, THEN THE REQUIRED TEST PILE LENGTH SHOULD BE EQUAL TO PRODUCTION PILE LENGTH + 5'-0".
- UNDER 'GENERAL PILE NOTES', NOTE 2, THE DESIGNER MUST CHOOSE BETWEEN 2(A) AND 2(B) (AND DELETE THE NOTE CONTAINING THE METHOD NOT USED FOR THE PROJECT). METHOD 2(A) SHOULD BE USED IF THERE IS SUFFICIENT TIME FOR THE CONTRACTOR TO ORDER PRODUCTION PILES BASED ON TEST PILE RESULTS. THIS TYPICALLY APPLIES ONLY TO LARGER-SIZED PROJECTS OR WHEN PILE DRIVING IS NOT THE CRITICAL PATH. METHOD 2(B) IS MORE COMMON DUE TO TIME CONSTRAINTS IN THE CONSTRUCTION SCHEDULE AND THEREFORE IS USED FOR MAJORITY OF DELDOT PROJECTS.
- UNDER 'STEEL H-PILE NOTES', NOTE 2, AND THE STEEL H-PILE SPLICE DETAILS: IT SHOULD BE CLEAR THAT WHILE SUCH DETAILS ARE RECOMMENDED AND 'PRE-APPROVED', THE CONTRACTOR SHOULD BE ENCOURAGED TO USE OTHER ALTERNATIVE SPLICE DETAILS THAT REDUCES CONSTRUCTION TIME AND/OR THE TOTAL CONSTRUCTION COSTS.
- UNDER 'STEEL H-PILE NOTES', NOTE 3, THIS NOTE IS ONLY NECESSARY IF THE PILE TIP IS EXPECTED TO COME IN CONTACT WITH BOULDERS AND/OR WILL BE DRIVEN INTO THE BEDROCK. OTHERWISE, DELETE THE NOTE.
- THE 'PILE INSTALLATION DATA' TABLE SHOULD BE USED FOR ALL PROJECTS. IF MINIMUM TIP ELEVATION IS NOT REQUIRED FOR THE PROJECT, THE DESIGNER SHOULD SIMPLY PLACE 'N/A' UNDER THE 'MINIMUM TIP ELEVATION' COLUMN. THE 'ACTUAL FIELD DATA' INFORMATION SHOULD BE FILLED OUT BY THE FIELD INSPECTOR AND INCLUDED IN THE AS-BUILT DRAWINGS.
- THE DESIGNER MUST EVALUATE THE STRUCTURAL CAPACITY OF THE PILE FOR ANTICIPATED DRIVING CONDITIONS AND WHEN STRENGTH 1 LOADS ARE APPLIED TO THE PILES AS PART OF PILE SIZING SELECTION.
- THE DESIGNER MUST DETERMINE WHETHER THE PILE BE CLASSIFIED AS 'FREE HEAD' OR 'FIXED HEAD'.  
(a) STANDARD DELDOT PRACTICE REQUIRES THE TOP OF PILE TO PROJECT A MINIMUM OF 12" INTO THE PILE CAP AFTER ALL DAMAGED MATERIAL HAS BEEN REMOVED. PILES MEETING THESE MINIMUM REQUIREMENTS WILL BE CONSIDERED AS 'FREE HEAD'.  
(b) FOR A PILE TO BE CLASSIFIED AS 'FIXED HEAD', THE PILE MUST MEET ALL THE REQUIREMENTS AS SPECIFIED IN 10(a) WITH EXCEPTION THAT TOP OF PILE MUST PROJECT INTO THE PILE CAP A MINIMUM OF 2" PILE DIA. AFTER ALL DAMAGED MATERIAL HAVE BEEN REMOVED.
- FOR PILE BENTS, THE DESIGNER MUST DETERMINE THE POINT OF FIXITY AS PER A107.3.4.13 AND SECTION 107.5.4, FURTHERMORE, THE DESIGNER MUST CONSIDER THE SLENDERNESS RATIO WHEN SELECTING THE PILE SIZE FOR BOTH PRODUCTION AND TEST PILES.
- REFER TO SECTION 107.3.4.4 FOR MORE INFORMATION ON STEEL H-PILES.
- FOR CERTAIN TYPES OF CONSTRUCTION SUCH AS ACCELERATED BRIDGE CONSTRUCTION WITH PRECAST CONCRETE SUBSTRUCTURES, CONSIDER ADDING A NEW NOTE UNDER 'PROJECT SPECIFIC PILE NOTES' ASSIGNING A VALUE OF LESS THAN 3 INCHES SPECIFIED IN SECTION 605.3.4.B.9 OF STANDARD SPECIFICATIONS FOR MAXIMUM ALLOWABLE VARIATION AT THE TOP OF THE PILE IN ANY DIRECTION FROM THE LOCATION SHOWN IN THE CONTRACT DOCUMENTS.

